

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process for making an *in vivo* model of human leukemia comprising

a) pre-conditioning an immunodeficient ~~rodent~~ mouse by administering to the ~~rodent~~ mouse a sub-lethal dose of irradiation and injecting the ~~rodent~~ mouse with an effective pre-conditioning amount of mononuclear cells derived from human fetal cord blood;

b) maintaining the ~~rodent~~ mouse from step (a) for 5 to 10 days; and

c) injecting the ~~rodent~~ mouse from step (b) with an effective engrafting amount of primary human leukemia cells.

2. (Canceled)

3. (Currently amended) The process of claim 2 1 wherein the immunodeficient mouse is a NOD/scid mouse.

4. (Currently amended) The process of claim 1 wherein administering the sub-lethal dose of irradiation is accomplished by irradiating the ~~rodent~~ mouse with 300 to 400 rads of total body gamma radiation.

5. (Previously presented) The process of claim 1 wherein the effective engrafting amount of primary human leukemia cells is from 10^6 to 10^7 cells.

6. (Original) The process of claim 1 wherein the primary human leukemia cells are T-cell acute lymphoblastic leukemia (T-ALL) cells.

7. (Previously presented) The process of claim 1 wherein the

effective pre-conditioning amount of human fetal cord blood mononuclear cells is from 10^6 to 10^8 cells.

8. (Original) The process of claim 1 wherein the mononuclear cells are stem cells.

9. (Original) The process of claim 8 wherein the stem cells comprise mesenchymal stem cells.

10. (Original) The *in vivo* model of human leukemia produced by the process of claim 1.

11. (Currently amended) An immunodeficient ~~rodent~~ mouse having human fetal cord blood cells and having engrafted human leukemia cells.

12. (Currently amended) The ~~rodent~~ mouse of claim 11 wherein the leukemia-initiating cells are maintained within the leukemia-engrafted ~~rodent~~ mouse.

13. (Canceled)

14. (Currently amended) The mouse of claim ~~13~~ 11 that is a NOD/scid mouse.

15. (Currently amended) The ~~rodent~~ mouse of claim 11 that is irradiated, injected with human fetal cord blood mononuclear cells and then injected with human primary leukemia cells.

16. (Currently amended) The ~~rodent~~ mouse of claim 11 wherein the engrafted leukemia cells are found in the bone marrow and spleen of the ~~rodent~~ mouse.

17. (Currently amended) A process for making an *in vivo* model of human leukemia comprising

a) pre-conditioning an immunodeficient ~~rodent~~ mouse by administering to the ~~rodent~~ mouse a sub-lethal dose of irradiation and injecting the ~~rodent~~ mouse with an effective pre-conditioning amount of stem cells derived from bone marrow;

- b) maintaining the ~~rodent~~ mouse from step (a) for 5 to 10 days; and
- c) injecting the ~~rodent~~ mouse from step (b) with an effective engrafting amount of primary human leukemia cells.